

Listing of Claims:

This listing of claims will replace all prior versions, and listing of claims in the application.

1. (Previously Presented) A slot machine, comprising:
a central processing unit for operating the slot machine in response to a wager; and
a reel mechanism including a motor, a symbol-bearing reel, and a reel driver, said motor including a rotatable shaft, said reel being mounted to said shaft, said reel driver including a local microcontroller distinct from and coupled to said central processing unit, said reel driver being coupled to said motor to cause said motor to rotate said reel, said local microcontroller performing low-level reel driver operations independent from said central processing unit;
wherein said central processing unit sends to said local microcontroller at least one of the group selected from an acceleration profile for accelerating said reel and a deceleration profile for decelerating said reel.
2. (Previously Presented) The slot machine of claim 1, wherein in response to actuation by a player, said reel is rotated and stopped to place the symbols of said reel in visual association with one or more pay lines.
3. (Previously Presented) The slot machine of claim 1, wherein said low-level reel driver operations include monitoring said reel and at least partially controlling its position.
4. (Previously Presented) The slot machine of claim 3, wherein said local microcontroller monitors said reel by sampling its state multiple times per second in real time, and responds with control commands for controlling the position of said reel.
5. (Previously Presented) The slot machine of claim 1, wherein said local microcontroller is serially connected to said central processing unit.
6. (Canceled)

7. (Previously Presented) The slot machine of claim 1, wherein said central processing unit issues high-level commands to said local microcontroller, said high-level commands including a start spin command for spinning said reel and a stop command for stopping said reel at a specified stop position.

8. (Previously Presented) The slot machine of claim 1, wherein said reel includes an encoder for indicating the position of said reel, and wherein said reel driver includes an optical detector for reading said encoder, said local microcontroller being coupled to said optical detector to monitor the position of said reel.

9. (Previously Presented) A slot machine, comprising:

a motor including a rotatable shaft;

a symbol-bearing reel mounted to said shaft;

a reel driver including a local microcontroller serially linked to said central processing unit, said reel driver being coupled to said motor to cause said motor to rotate said reel, said local microcontroller performing low-level reel driver operations related to rotation of said reel; and

a central processing unit issuing high-level commands to said reel driver related to the rotation of said reel, said high-level commands including an acceleration profile for accelerating said reel and a deceleration profile for decelerating said reel.

10. (Previously Presented) The slot machine of claim 9, wherein said high-level commands include a start spin command and a stop command, said start spin command instructing said reel driver to cause said motor to rotate said reel, said stop command instructing said reel driver to stop said motor from rotating said reel at a specified stop position.

11. (Previously Presented) The slot machine of claim 10, wherein said low-level commands include sampling a state of said reel in real time and at least partially controlling its position.

12. (Previously Presented) A slot machine, comprising:

a motor including a rotatable shaft;

a symbol-bearing reel mounted to said shaft;

a reel driver including a local microcontroller, said reel driver being coupled to said motor to cause said motor to rotate said reel; and

a central processing unit for issuing a start spin command and a stop command to said reel driver, said start spin command instructing said reel driver to cause said motor to rotate said reel, said start spin command including an acceleration profile for accelerating said reel, said stop command instructing said reel driver to stop said motor from rotating said reel at a specified stop position, said stop command including a deceleration profile for decelerating said reel;

said local microcontroller monitoring said reel in real time and at least partially controlling its position after said start spin command and prior to said stop command;

wherein said central processing unit sends configuration data to said local microcontroller for configuring said local microcontroller to a reel spinning game conducted with the slot machine.

13. (Previously Presented) The slot machine of claim 12, wherein said reel includes an encoder for indicating the position of said reel, and wherein said reel driver includes an optical detector for reading said encoder, said local microcontroller being coupled to said optical detector to monitor the position of said reel in real time.

14. (Currently Amended) The slot machine of claim 1, wherein said central processing unit sends to said local microcontroller configuration data ~~includes~~ including at least one of the type of slot machine, ~~a number of symbols on said reel,~~ how to drive said motor, ~~and~~ or a number of steps in said motor if said motor is a stepper motor.

15. (Previously Presented) The slot machine of claim 1, wherein in response to receiving said configuration data, said local microcontroller processes said configuration data and reports a status of configuration of said local microcontroller back to said central processing unit.

16. (Currently Amended) The slot machine of claim 9, wherein said central processing unit sends to said local microcontroller ~~configuration data includes~~ at least one of the type of slot

machine, a number of symbols on said reel, how to drive said motor, ~~and~~ or a number of steps in said motor if said motor is a stepper motor.

17. (Previously Presented) The slot machine of claim 9, wherein in response to receiving said configuration data, said local microcontroller processes said configuration data and reports a status of configuration of said local microcontroller back to said central processing unit.

18. (Previously Presented) The slot machine of claim 12, wherein said configuration data includes at least one of the type of slot machine, a number of symbols on said reel, how to drive said motor, and a number of steps in said motor if said motor is a stepper motor.

19. (Previously Presented) The slot machine of claim 12, wherein in response to receiving said configuration data, said local microcontroller processes said configuration data and reports a status of configuration of said local microcontroller back to said central processing unit.

20. (Previously Presented) A method of configuring a slot machine to a reel spinning game conducted with the machine, the method comprising:

providing a physical symbol-bearing reel;

providing a reel controller for performing low-level operations related to movement of said reel;

providing a central processing unit for issuing high-level commands to said reel controller related to the movement of said reel;

sending configuration data from said central processing unit to said reel controller to configure said reel controller to the reel spinning game; and

sending from said central processing unit to said reel controller at least one of the group selected from an acceleration profile for accelerating said reel and a deceleration profile for deceleration said reel.

21. (Previously Presented) The method of claim 20, wherein said configuration data includes at least one of the type of slot machine, a number of symbols on said reel, how to drive said motor, and a number of steps in said motor if said motor is a stepper motor.

22. (Previously Presented) The method of claim 20, further including processing said configuration data with said reel controller and reporting a status of configuration of said reel controller back to said central processing unit.

23. (Previously Presented) A method of configuring a slot machine to a reel spinning game conducted with the machine, the method comprising:

- providing a physical symbol-bearing reel including an encoder for indicating a position of said reel;

- providing a reel controller for performing low-level operations related to movement of said reel;

- providing a central processing unit for issuing high-level commands to said reel controller related to the movement of said reel;

- sending from said central processing unit to said reel controller an acceleration profile for accelerating said reel;

- sending a command from said central processing unit to said reel controller to determine a type of said encoder;

- determining the type of said encoder with said reel controller;

- sending configuration data from said central processing unit to said reel controller to configure said reel controller to the reel spinning game; and

- using said reel controller to compare the determined type of said encoder with said configuration data.

24-26. (Canceled)

27. (Previously Presented) The method of claim 23, further including reporting an error back to said central processing unit if the determined type of said encoder conflicts with said configuration data.

28. (Previously Presented) A method of configuring a slot machine to a reel spinning game conducted with the machine, the method comprising:

providing a physical symbol-bearing reel including an encoder for indicating a position of said reel;

providing a reel controller for performing low-level operations related to movement of said reel;

providing a central processing unit for issuing high-level commands to said reel controller related to the movement of said reel;

sending from said central processing unit to said reel controller an acceleration profile for accelerating said reel;

sending a command from said central processing unit to said reel controller to determine a type of said encoder; and

determining the type of said encoder with said reel controller, which includes causing a motor to spin said reel and detecting a physical characteristic of said encoder.

29. (Previously Presented) A method of configuring a slot machine to a reel spinning game conducted with the machine, the method comprising:

providing a physical symbol-bearing reel;

providing a reel controller for performing low-level operations related to movement of said reel; and

providing a central processing unit for issuing high-level commands to said reel controller related to the movement of said reel, said high-level commands including a command for informing said reel controller of at least one of the group selected from an acceleration profile for accelerating said reel and a deceleration profile for decelerating said reel.

30. (Previously Presented) The slot machine of claim 1, wherein said central processing unit is programmed to send a start spin command to said local microcontroller, said acceleration profile being included in said start spin command.

31. (Previously Presented) The slot machine of claim 30, wherein said start spin command further includes information indicating which direction to spin said reel.

32. (Previously Presented) The slot machine of claim 30, wherein said start spin command further includes a final constant spin speed of said reel.

33. (Previously Presented) The slot machine of claim 1, wherein said central processing unit is programmed to send a stop command to said local microcontroller, said deceleration profile being included in said stop command.

34. (Previously Presented) The slot machine of claim 33, wherein said stop command includes a reel stop position.

35. (Previously Presented) The slot machine of claim 10, wherein said acceleration profile is included in said start spin command and said deceleration profile is included in said stop command.

36. (Previously Presented) The slot machine of claim 10, wherein said start spin command includes information indicating what direction to spin said reel and a final constant spin speed and said stop command includes said specified stop position.

37. (Previously Presented) The slot machine of claim 12, wherein said start spin command includes information indicating what direction to spin said reel and a final constant spin speed and said stop command includes said specified stop position.

38. (Previously Presented) The method of claim 20, further comprising causing said reel to spin according to said acceleration profile.

39. (Previously Presented) The method of claim 20, further comprising causing said reel to stop spinning according to said deceleration profile.

40. (Previously Presented) The method of claim 23, further comprising sending from said central processing unit to said reel controller a deceleration profile for decelerating said reel.

41. (Previously Presented) The method of claim 28, further comprising sending from said central processing unit to said reel controller a deceleration profile for decelerating said reel.